state). More particularly, computer **14** may tailor a dosage (e.g., UV-C light exposure for a period of application time) to target one or more types of surface contaminants (e.g., bacteria, viruses, fungi, other pathogens, etc.). For example, using the environmental sensor data collected via sensors **18**, computer **14** in some instances may identify potential contaminants and, based on that identification, determine an appropriate dosage. Non-limiting examples of environmental sensor data include cabin humidity data, cabin temperature data, cabin surface sunlight data, surface moisture data, cabin airflow data, and the like. According to one example, in determining the dosage, computer **14** may determine a wavelength (or band), determine an intensity (of UV light), and/or determine an exposure duration (of the UV light) which may be suitable for eliminating, exterminating, or killing the identified contaminant while avoiding overdosing the surface **22**—as overdosing may result in deterioration of vehicle interior components (e.g., such as interior trim, moldings, etc. which may comprise rubber, plastic, or other materials which degrade in the presence of UV light). In addition, the computer **14** may actuate lighting system **16** to an OFF state following an expiration of the exposure duration or when, during the duration, the computer **14** determines that a user may be entering the vehicle **12**. In at least some instances, in order to inhibit or minimize the likelihood of contaminant growth within the cabin **20**, the computer **14** may control at least one climate control parameter following the UV dosage application (e.g., controlling cabin humidity, temperature, airflow, etc.). Computer **14** and other aspects of the cleaning system **10** are described in greater detail below.

[0032] FIGS. **1-2** illustrate an illustrative vehicle **12** that may comprise cleaning system **10**. Vehicle **12** is shown as a passenger car; however, vehicle **12** could also be a truck, sports utility vehicle (SUV), recreational vehicle, bus, train car, aircraft, or the like that includes the cleaning system **10**. Vehicle **12** may be operated in any one of a number of autonomous modes. In at least one example, vehicle **12** may operate as an autonomous taxi, autonomous school bus, or the like e.g., operating in a fully autonomous mode (e.g., a level 5), as defined by the Society of Automotive Engineers (SAE) (which has defined operation at levels 0-5). For example, at levels 0-2, a human driver monitors or controls the majority of the driving tasks, often with no help from the vehicle **12**. For example, at level 0 ("no automation"), a human driver is responsible for all vehicle operations. At level 1 ("driver assistance"), the vehicle **12** sometimes assists with steering, acceleration, or braking, but the driver is still responsible for the vast majority of the vehicle control. At level 2 ("partial automation"), the vehicle **12** can control steering, acceleration, and braking under certain circumstances without human interaction. At levels 3-5, the vehicle **12** assumes more driving-related tasks. At level 3 ("conditional automation"), the vehicle **12** can handle steering, acceleration, and braking under certain circumstances, as well as monitoring of the driving environment. Level 3 may require the driver to intervene occasionally, however. At level 4 ("high automation"), the vehicle **12** can handle the same tasks as at level 3 but without relying on the driver to intervene in certain driving modes. At level 5 ("full automation"), the vehicle **12** can handle all tasks without any driver intervention. In at least one example, vehicle **12** includes one or more autonomous driving systems, one or more autonomous driving computers, and the like to enable operation at level 5 and thus may operate in a fully autonomous mode. In this fully autonomous mode, the vehicle **12** may operate as an autonomous taxi or the like.

[0033] When vehicle **12** is used as an autonomous taxi, bus, or the like, the cabin **20** typically will be used daily by a number of different users. As used herein, a cabin is a region of vehicle **12** adapted with passenger seating. The cleaning system **10** may facilitate some cleaning between at least some occupancies of these different users—e.g., during periods of less frequent vehicle use. The cleaning system **10** described herein may be particularly desirable in relatively small, enclosed environments: since smaller and enclosed regions often have temperatures suitable for human comfort (e.g., such as cabin **20**) but which also can harbor and/or promote the growth of infectious pathogens such as bacteria, viruses, and fungi; and since both infected and un-infected users regularly may utilize vehicle **12**—e.g., thus making the vehicle cabin **20**, without the cleaning system **10**, a more likely vessel for spreading infection. Thus, according to at least one example, cleaning system **10** may be used to minimize the spread of respiratory, gastrointestinal, and other illnesses (e.g., which can be spread by user contact with contaminated surfaces **22** within the vehicle **12**).

[0034] According to one example, cleaning system **10** comprises a wired or wireless communication network connection **26** which facilitates communication between one or more of: computer **14**, lighting system **16**, environmental sensor(s) **18**, an occupant detection system **28**, a climate control system **30**, a human-machine interface (HMI) module **32**, and a telematics module **34**. In at least one example, the connection **26** includes one or more of a controller area network (CAN) bus, Ethernet, Local Interconnect Network (LIN), a fiber optic connection, or the like. Other examples also exist. For example, alternatively or in combination with e.g., a CAN bus, connection **26** could comprise one or more discrete wired or wireless connections (e.g., between the sensors **18** and computer **14**, between the lighting system **16** and computer **14**, etc.).

[0035] Computer **14** may be a single computer (or multiple computing devices—e.g., shared with other vehicle systems and/or subsystems). Computer **14** may be a body control module (BCM); however, this is merely one non-limiting example. Computer **14** may comprise a processor **40** (e.g., or processing circuit) coupled to memory **42**. For example, processor **40** can be any type of device capable of processing electronic instructions, non-limiting examples including a microprocessor, a microcontroller or controller, an application specific integrated circuit (ASIC), etc.—just to name a few. In general, computer **14** may be programmed to execute digitally-stored instructions, which may be stored in memory **42**, which enable the computer **14**, among other things, to: receive sensor data from at least one environmental sensor **18**; determine at least one light source parameter based on the sensor data; determine a contaminant type based on the sensor data; actuate lighting system **16** based on the determined parameter and/or based on the contaminant type; execute a combination of these exemplary instructions; or the like. Other programmable instructions executable by processor **40** will be discussed in greater detail below.

[0036] Memory **42** may include any non-transitory computer usable or readable medium, which may include one or more storage devices or articles. Exemplary non-transitory computer usable storage devices include conventional hard disk, solid-state memory, random access memory (RAM), read-only memory (ROM), erasable programmable read-